Title (en)

Vehicle suspension apparatus.

Title (de)

Vorrichtung zur Fahrzeugaufhängung.

Title (fr)

Dispositif de suspension de véhicule.

Publication

EP 0426339 A1 19910508 (EN)

Application

EP 90311497 A 19901019

Priority

US 43085889 A 19891102

Abstract (en)

Vehicle suspension apparatus derives the vertical wheel and vertical body corner velocities (xi,yi) at each corner of the vehicle body (10) and derives therefrom a set of at least three body state velocity variables (P,R,H) descriptive of vertical body motions and attitude. These body state velocity variables may be the body heave, roll and pitch velocities or a plurality of the vertical body corner velocities The apparatus computes desired forces between each body corner, and its corresponding wheel (11) from a linear combination of the vertical wheel velocity of that wheel and the body state velocity variables and derives control signals from the desired forces and, in a semi-active system, the sign of demand power. The control signals are applied to vertical force actuators (20) connected to exert vertical forces between the vehicle body and wheel at the vehicle body corners and capable of response at frequencies at least twice the resonant wheel vibration frequency for real time wheel control as well as body control.

IPC 1-7

B60G 17/01; F16F 9/46

IPC 8 full level

B60G 17/00 (2006.01); **B60G 17/015** (2006.01); **B60G 17/018** (2006.01); **B60G 17/08** (2006.01); **F16F 9/50** (2006.01)

CPC (source: EP)

B60G 17/018 (2013.01); **B60G 17/08** (2013.01); B60G 2202/413 (2013.01); B60G 2202/42 (2013.01); B60G 2400/102 (2013.01); B60G 2400/106 (2013.01); B60G 2400/204 (2013.01); B60G 2400/206 (2013.01); B60G 2400/252 (2013.01); B60G 2400/40 (2013.01); B60G 2400/60 (2013.01); B60G 2400/63 (2013.01); B60G 2400/91 (2013.01); B60G 2500/10 (2013.01); B60G 2600/02 (2013.01); B60G 2600/14 (2013.01); B60G 2600/16 (2013.01); B60G 2600/18 (2013.01); B60G 2600/60 (2013.01); B60G 2600/604 (2013.01); B60G 2600/70 (2013.01); B60G 2600/76 (2013.01); B60G 2800/014 (2013.01); B60G 2800/916 (2013.01)

Citation (search report)

- [A] EP 0321078 A2 19890621 - FORD MOTOR CO [GB], et al
- [A] EP 0236947 A2 19870916 - TOYOTA MOTOR CO LTD [JP]
- [A] RESEARCH DISCLOSURE April 1989, RD30070 "Reduced Order Active Suspension Control" M.A.Salman et al.

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DE102009008994A1

Designated contracting state (EPC)

DE ES FR GB

DOCDB simple family (publication)

EP 0426339 A1 19910508; **EP 0426339 B1 19930609**; DE 69001881 D1 19930715; DE 69001881 T2 19930923; ES 2041144 T3 19931101; JP H03220012 A 19910927

DOCDB simple family (application)

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